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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,293	11/19/2003	Bruce W. Ramme	960049.90324	7543

26710 7590 12/27/2005

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EXAMINER
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MARCANTONI, PAUL D

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/717,293	<b>Applicant(s)</b> RAMME ET AL.	
	<b>Examiner</b> Paul Marcantoni	<b>Art Unit</b> 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11/8/05 RCE.  
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-11,13-18 and 20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1,3,5-11,13-18 and 20 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

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Applicant's RCE and response filed 11/8/05 have been fully considered but they are not persuasive.

35 USC 103:

Claims 1,3,5-11, 13-18, and 20 remain rejected under 35 U.S.C. 103(a) as obvious over Srinivasachar et al. '447 or 120, Matsuyama et al. 663, Siddle '851 B1, Edlund et al. '567 B1, *Zemskov et al., EP 380467 (Fercher et al.), Fujita (JP 04061981), Hamaguchi et al. (JP 07155722 or JP 07155723), Hoermeyer et al. (DE 19801321), Okada (JP 2003154233), or Cochran et al. (RD 470003)* alone or in view of Tolman (US Patent No. 5,280,701) and line 6 , page 8 of applicants specification admitting that their process "may" be a continuous process (not must be a continuous process).

*Note : Italicized references are one page abstracts only.*

All of the above cited references teach heating a sorbent which can be a solid material such as fly ash, activated carbon, soil, etc. to liberate mercury from these solid particulates thus anticipating the instant invention. Even if not anticipated, overlapping ranges of temperature would have been prima facie obvious to one of ordinary skill in the art and would have expected to obtain the same result of mercury removal (see abstract and claims for each reference teaching heating to remove mercury).

The applicants also present a particular method how they heat or pass heat through openings to remove mercury. It is the examiner's position that technique of heating would have been an obvious design choice for one of ordinary skill in the art as long as a critical temperature is achieved that leads to the removal/liberation of mercury from the solid particulate matter.

Tolman teaches that the use of a fluidized bed combustor as a heating means is old and conventional in the art and could have been applied as the heating source for the primary references above because this heating technology was known at the time of the applicant's invention. Also, the applicants do not require that their process be continuous but only that it may be continuous. Nevertheless, it is still *prima facie* obvious for one of ordinary skill in the art to make a batch process continuous. *In re Dilnot* 138 USPQ 248 (CCPA 1963).

Response:

The applicants again repeat arguments that as a result of their amendment of placing the particulate matter containing mercury on a *fluidized bed* conveyor wherein it is heated, it is held patentably distinct over the prior art. The applicants further argue that the material may be heat treated to remove the mercury and conveyed at the same time (ie simultaneously). In rebuttal, the applicants do not dispute that it is old in the art to treat sorbent or material containing affixed mercury in a heating range overlapping the instant invention. They only argue that their material is heated and conveyed versus the prior art which is alleged to be batch or stationary heating of the mercury contaminated sorbent. In other words, applicants' process is allegedly patentably distinct over the prior art because it is a continuous process and uses a fluidized bed. In rebuttal, the applicants do not state that in their own specification that the process of the invention must be continuous but only that the method "may" be a continuous process (see line 6 of page 8 of applicants' specification [0029]) wherein the temperature of the sorbent is exposed to heated air to remove the mercury. Applicants

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thus leave open the possibility by using “may” for a batch or stationary (non-continuous) process wherein no conveyance occurs but only direct heating of the mercury contaminated sorbent. There is no requirement that their process *must* be a continuous process.

Also, it is the examiner’s position that it would have been an obvious design choice for the applicants to utilize either a continuous process involving both heating and conveying the mercury contaminated sorbent wherein the mercury is removed or a batch process. First, It is well within the expected skill of the technician of ordinary skill in the art to operate a process continuously. See *In re Dilnot* 796 OG 591, 1963 CD 745 (p.752); *In re Lincoln*, 1942 CD 386; *Dow v Coe*, 1942 CD 128; *In re Korpi et al.*, 1947 CD 290 73 USPQ 229). Second, it is also within the level of ordinary engineering skill in the art to convert a process from a continuous process to a batch process and vice versa. *In re Dilnot* 138 USPQ 248 (CCPA 1963). The performance of two steps simultaneously which have previously been performed in sequence was held to have been obvious. *In re Tatincloux* 108 USPQ 125 (CCPA 1955).


The applicants argue that the case law See *In re Dilnot* 796 OG 591, 1963 CD 745 (p.752); *In re Lincoln*, 1942 CD 386; *Dow v Coe*, 1942 CD 128; *In re Korpi et al.*, 1947 CD 290 73 USPQ 229) all required that all the elements of the claimed invention were shown with the exception of the continuous limitation. The applicants appear to hold the position that the prior art does not teach all the limitations of their claimed process. The examiner disagrees because the prior art does teach all the elements of applicants’ claimed process which is merely heating the sorbent such as fly ash or

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activated carbon at a temperature of at least 700 F to liberate mercury from the sorbent. While the prior art would not all teach a continuous process, it has been shown by this case law that making a batch process a continuous process is well established as prima facie obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Paul Marcantoni  
Primary Examiner  
Art Unit 1755